

REMARKS

Claims 1-92 were pending in this application. All of the pending claims were rejected under 35 U.S.C. 102(e) as being anticipated by Choudhury. Claims 1 and 5 are currently amended. Claims 14-92 are cancelled without prejudice. Reconsideration is respectfully requested.

Claims 1 and 5 have been amended to emphasize how a queue law function and queue size calculation can be employed to proportionally affect flows at the sending node regardless of the sending rates of the particular flows. Choudhury fails to teach the use of a queue law function **of the receiving node** to govern operation **of the sending node**. The Office suggests that Choudhury teaches the queue law function at Col. 4, lines 27-41, but that passage recites the actual behaviour of the node. For example, the passage recites actions to be taken “when a packet arrives,”<sup>1</sup> and “if there is enough remaining memory space in the buffer.”<sup>2</sup> In contrast, a queue law function is an equation “representative of average queue size of an exemplary queue of the receiving node based on traffic conditions and percentage of dropped packets,” as recited in claims 1 and 5 as amended. Claims 1 and 5 therefore distinguish Choudhury, and withdrawal of the rejections of those claims is requested.

Because Choudhury fails to teach a queue law function, it follows that Choudhury fails to teach use of the **intersection** of the queue law function of a receiver with the control function of the sender to define operation. This feature is recited in claim 1 as “wherein the control function prompts a gradual increase of drop probability of all data packets in flows bound for the

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<sup>1</sup> Col. 4, line 29

<sup>2</sup> Col. 4, lines 34-35

receiving network node in an overload condition defined by intersection of the queue law function and the control function.” Claim 1 therefore further distinguishes Choudhury, and withdrawal of the rejection is again requested.

Each of the independent claims also distinguishes Choudhury by reciting a gradual increase of packet drop percentage. The Office broadly cites the passage spanning Col. 6, line 31 to col. 7, line 26 as teaching this feature, but Applicant finds no such teaching in that section. Applicant does find, however, that Choudhury teaches directly against the limitation in Fig. 3A and the associated text. In particular, the **sending node** determines in step (203) whether a packet is eligible for drop **based on buffer space available at the sending node.**<sup>3</sup> Note also that if memory is determined to be unavailable in step (203), then a packet is dropped in step (226), i.e., there is 100% probability of a packet being dropped. In contrast, the claimed packet drop **decision made by the sender** is based at least in part on modeled behaviour of the **receiver**, and the drop probability does not move from 0% to 100% as a step function, but rather increases gradually. Claims 1 and 5 recite that the queue law function describes the receiver node, and the control function describes the sender node, thereby distinguishing the drop decision based on actual buffer space available at the sender. Each of the claims recites language similar to “wherein the control function prompts a gradual increase of drop probability.” Moving from 0% drop probability to 100% drop probability is not a gradual increase. Withdrawal of the rejections of claims 1 and 5 is therefore requested again for the above reasons. The dependent claims, 2-4 and 6-13, further distinguish the invention, and are allowable for the same reasons as their respective base claims. Consequently, withdrawal of the rejections of the dependent claims is also requested.

For the reasons stated above, all of the pending claims are believed to be allowable, and such action is requested. The Examiner is encouraged to contact Applicants' Attorney at 978-264-4001 to discuss any matters which might expedite allowance of this application.

Respectfully Submitted,

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Date

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<sup>3</sup> See also col. 4, lines 42-46